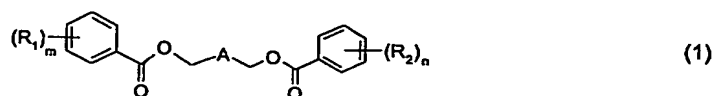


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Claims

## 1. A colour developer of the formula (1)



5 wherein

A stands for a unsubstituted or substituted divalent aromatic radical, and

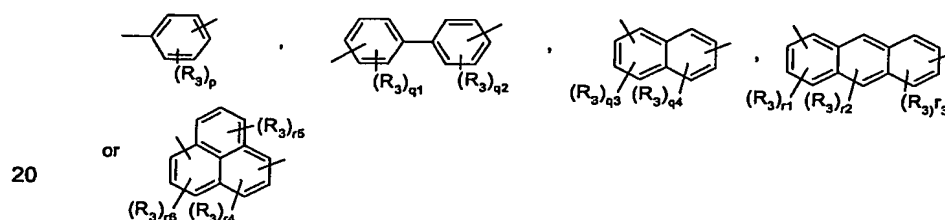
R<sub>1</sub> and R<sub>2</sub> are independent of each other and stand for -OH, unsubstituted or substituted C<sub>1</sub>-C<sub>8</sub>alkyl, unsubstituted or substituted C<sub>1</sub>-C<sub>8</sub>alkoxy, unsubstituted or substituted phenyl or naphthyl, -COOR<sub>1a</sub>, wherein R<sub>1a</sub> stands for hydrogen, unsubstituted or substituted C<sub>1</sub>-

10 C<sub>8</sub>alkyl, benzyl or unsubstituted or substituted phenyl, -C(O)R<sub>1a</sub>, or -NR<sub>1a</sub>R<sub>1b</sub>, wherein R<sub>1b</sub>, independently from R<sub>1a</sub>, stands for hydrogen, unsubstituted or substituted C<sub>1</sub>-C<sub>8</sub>alkyl, benzyl or unsubstituted or substituted phenyl, m stands for 0, 1, 2, 3, 4 or 5, n stands for 0, 1, 2, 3, 4, or 5, with the proviso, that if A stands for para-phenylene, R<sub>1</sub> for hydroxy (m≠0), then R<sub>2</sub> is not hydroxy.

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2. A colour developer according to claim 1, wherein the divalent aromatic radical is phenylene, biphenylene, naphthylene, or anthrylene, which can be substituted.

3. A colour developer according to claims 1 or 2, wherein the divalent aromatic radical is



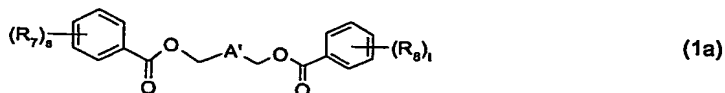
wherein R<sub>3</sub> stands for hydrogen, hydroxy, unsubstituted or substituted phenyl or naphthyl, unsubstituted or substituted C<sub>1</sub>-C<sub>24</sub>alkyl, unsubstituted or substituted C<sub>5</sub>-C<sub>10</sub>cycloalkyl, unsubstituted or substituted C<sub>1</sub>-C<sub>24</sub>alkoxy, unsubstituted or substituted phenoxy or naphthoxy, halomethyl, -COOR<sub>4</sub>, wherein R<sub>4</sub> stands for hydrogen or C<sub>1</sub>-C<sub>8</sub>alkyl, -CONR<sub>5</sub>R<sub>6</sub>,

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wherein  $R_5$  and  $R_6$ , independently from each other stand for hydrogen or  $C_1$ - $C_8$ alkyl, or - $NO_2$ ,  $p$ ,  $q1$  and  $q2$ , independently from each other stand for 0, 1, 2, 3, 4,  $q3$ ,  $q4$ ,  $r1$ ,  $r3$  and  $r5$ , independently from each other, stand for 0, 1, 2, or 3,  $r2$ ,  $r4$  and  $r6$ , independently from each other, stand for 0, 1 or 2.

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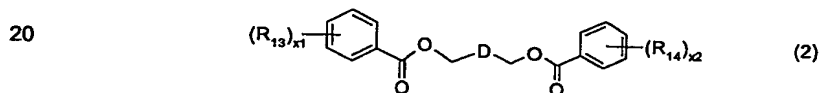
4. A mixture consisting of  
(a) a color developer (1a)



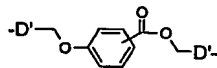
wherein

- 10 A' stands for a unsubstituted or substituted divalent aromatic radical,  
 $R_7$  and  $R_8$  are independent of each other and stand for -OH, unsubstituted or substituted  $C_1$ - $C_8$ alkyl, unsubstituted or substituted  $C_1$ - $C_8$ alkoxy, unsubstituted or substituted phenyl or naphthyl, -COOR<sub>1a</sub>, wherein  $R_{1a}$  stands for hydrogen, unsubstituted or substituted  $C_1$ - $C_8$ alkyl, benzyl or unsubstituted or substituted phenyl, -C(O)R<sub>1a</sub>, or -NR<sub>1a</sub>R<sub>1b</sub>, wherein  $R_{1b}$ ,  
 15 independently from  $R_{1a}$ , stands for hydrogen, unsubstituted or substituted  $C_1$ - $C_8$ alkyl, benzyl or unsubstituted or substituted phenyl,  
 $s$  stands for 0, 1, 2, 3, 4 or 5,  $t$  stands for 0, 1, 2, 3, 4, or 5,  
 and

(b) a compound of formula (2)



wherein D stands for



- wherein D' stands for a unsubstituted or substituted divalent aromatic radical,  $R_{13}$  stands for a substituent as defined for  $R_7$ ,  $R_{14}$  stands for a substituent as defined for  $R_8$ ,  $x1$  stands for  
 25 0, 1, 2, 3, 4 or 5,  $x2$  stands for 0, 1, 2, 3, 4, or 5,  
 and wherein the weight ratio of (1a) to (2) is chosen in the range from 99.9:0.1 to 0.1:99.9.

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5. A compound of formula (2) as defined in claim 4.

6. A heat sensitive composition consisting of

- 5 a) a colour forming compound, and  
b) a colour developer of the formula (1) as defined in claim 1.

7. A heat sensitive composition consisting of

- a) a colour forming compound, and  
10 b) a mixture of colour developer of the formula (1a) and compound of formula (2) as defined in claim 4.

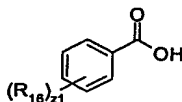
8. A heat sensitive recording material comprising the colour developer (1) as defined in claim 1 or the mixture as defined in claim 4.

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9. A heat sensitive recording material comprising the heat sensitive composition as defined in claim 6 or the heat sensitive composition as defined in claim 7.

10. A process for the manufacture of a colour developer of formula (1) by reacting a benzoic acid derivative with a dihalogen derivative, characterized in

- 20 (a) reacting benzoic acid derivative of formula (A1)



(A1)

with a dihalogen derivative of formula (B1)



(B1)

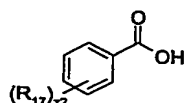
- 25 wherein  $R_{18}$  stands for -OH, unsubstituted or substituted  $C_1$ - $C_8$ alkyl, unsubstituted or substituted  $C_1$ - $C_8$ alkoxy, unsubstituted or substituted phenyl or naphthyl,  $-COOR_{18}$ , wherein  $R_{18}$  stands for hydrogen, unsubstituted or substituted  $C_1$ - $C_8$ alkyl, benzyl or unsubstituted or substituted phenyl,  $-C(O)R_{18}$ , or  $-NR_{18}R_{1b}$ , wherein  $R_{1b}$ , independently from  $R_{18}$ , stands for

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hydrogen, unsubstituted or substituted C<sub>1</sub>-C<sub>8</sub>alkyl, benzyl or unsubstituted or substituted phenyl, z1 stands for 0, 1, 2, 3, 4 or 5,

A<sub>1</sub> stands for a unsubstituted or substituted divalent aromatic radical, or

(b) reacting a mixture of benzoic derivatives (A1) and (A2)



(A2)

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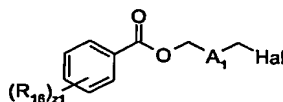
with a dihalogen derivative of formula (B1),

wherein R<sub>17</sub>, different from R<sub>18</sub>, stands for -OH, unsubstituted or substituted C<sub>1</sub>-C<sub>8</sub>alkyl, unsubstituted or substituted C<sub>1</sub>-C<sub>8</sub>alkoxy, unsubstituted or substituted phenyl or naphthyl, -COOR<sub>18</sub>, -C(O)R<sub>18</sub>, or

10 -NR<sub>1a</sub>R<sub>1b</sub>, z2 stands for 0, 1, 2, 3, 4 or 5,

or

(c) reacting benzoic acid derivative of formula (A1) with dihalogen derivative (B1) to yield compound (C1)



(C1)

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and then reacting compound (C1) with compound of formula (A2),

wherein the molar ratio of (A1) or ((A1)+(A2)) to (B1) is chosen in the range of from 3:1 to 10:1.

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11. A process for the manufacture of a mixture of colour developer (1) and compound of formula (2) by reacting a benzoic acid derivative with a dihalogen derivative, characterized in

(a) reacting benzoic acid derivative of formula (A1) as defined in claim 10,

with a dihalogen derivative of formula (B1) as defined in claim 10, or

(b) reacting a mixture of benzoic derivatives (A1) and (A2) as defined in claim 10,

25 with a dihalogen derivative of formula (B1),

or

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(c) reacting benzoic acid derivative of formula (A1) with dihalogen derivative (B1) to yield compound (C1) as defined in claim 10 and then reacting compound (C1) with compound of formula (A2), wherein the molar ratio of (A1) or ((A1)+(A2)) to (B1) is chosen in the range of less than 3:1.

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12. Use of the compounds of formula (1) as defined in claim 1 for the manufacture of a heat sensitive recording material.

10 13. Use of the mixture of developer (1a) and compound (2) as defined in claim 4 for the manufacture of a heat sensitive recording material.

14. Use of compound of formula (2) as defined in claim 5 for the manufacture of a heat sensitive recording material.

15 15. A mixture of a colour developer of formula (1) as defined in claim 1 and a compound of formula (2) as defined in claim 4, obtainable by the process as defined in claim 11.

20 16. A process for the manufacture of compound (2) as defined in claim 4, characterized in reacting compound (C1) as defined in claim 10 with colour developer (1) as defined in claim 1.